

APPENDIX DR (TDS Telecom Disaster Recovery Plan)

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1. PURPOSE

- 1.1 In the unlikely event of a disaster occurring that affects TDS TELECOM's long-term ability to deliver traffic to a Competitive Local Exchange Carrier (CLEC), general procedures have been developed to hasten the recovery process. Since each location is different and could be affected by an assortment of potential problems, a detailed recovery plan is impractical. However, in the process of reviewing recovery activities for specific locations, some basic procedures emerge that appear to be common in most cases.
- 1.2 These general procedures should apply to any disaster that affects the delivery of traffic for an extended time period. SPRINT will be given the same consideration during an outage and service will be restored as quickly as possible.
- 1.3 This document will cover the basic recovery procedures that would apply to every CLEC.
- 1.4 Notwithstanding the above, SPRINT and TDS TELECOM recognize and agree that restoration of service activities of either party may be superseded by the policies and procedures of the National Security Emergency Preparedness (NSEP) Telecommunications Service Priority (TSP) System contained in PART 64 of the Code of Federal Regulations.

2. SINGLE POINT OF CONTACT

- 2.1 When a problem is experienced, regardless of the severity, the TDS TELECOM Network Management Center (NMC) will observe traffic anomalies and begin monitoring the situation. Controls will be appropriately applied to insure the stability of TDS TELECOM's network; and, in the event that a switch or facility node is lost, the NMC will attempt to circumvent the failure using available reroutes.
- 2.2 TDS TELECOM's NMC will remain in control of the restoration efforts until the problem has been identified as being a long-term outage. At that time, the NMC will contact TDS TELECOM's Emergency Response Team (ERT) and relinquish control of the recovery efforts. Even though the ERT may take charge of the situation, the NMC will continue to monitor the circumstances and restore traffic as soon as damaged network elements are revitalized.
- 2.3 The telephone number for the TDS TELECOM Network Management Center in Madison, Wisconsin is 608-664-4200.

3. IDENTIFYING THE PROBLEM

- 3.1. During the early stages of problem detection, the NMC will be able to tell which CLECs are affected by the catastrophe. Further analysis and/or first hand observation will determine if the disaster has affected SPRINT only; TDS TELECOM only or a combination of both. The initial restoration activity will be largely determined by the equipment that is affected.
- 3.2. Once the nature of the disaster is determined and after verifying the cause of the problem, the NMC will initiate reroutes and/or transfers that are jointly agreed upon by the SPRINT Network Management Center and the TDS TELECOM NMC. The type and percentage of controls used will depend upon available network capacity. Controls necessary to stabilize the situation will be invoked and the NMC will attempt to re-establish as much traffic as possible.
- 3.3. For long-term outages, recovery efforts will be coordinated by the Emergency Response Team (ERT). Traffic controls will continue to be applied by the NMC until facilities are re-established. As equipment is made available for service, the ERT will instruct the NMC to begin removing the controls and allow traffic to resume.

4. SITE CONTROL

- 4.1. In the total loss of building use scenario, what likely exists will be a smoking pile of rubble. This rubble will contain many components that could be dangerous. It could also contain remains of any personnel on the premises at the time of the disaster. For these reasons, the local fire marshal with the assistance of the police will control the site until the building is no longer a threat to surrounding properties and the companies have secured the site from the general public.
- 4.2. During this time, the majority owner of the building should be arranging for a demolition contractor to mobilize to the site with the primary objective of reaching the cable entrance facility for a damage assessment. The results of this assessment would then dictate immediate plans for restoration, both short term and permanent.
- 4.3. In a less catastrophic event, i.e., the building is still standing and the cable entrance facility is usable, the situation is more complex. The site will initially be controlled by local authorities until the threat to adjacent property has diminished. Once the site is returned to the control of the companies, the following events should occur.
- 4.4. An initial assessment of the main building infrastructure systems (mechanical, electrical, fire and life safety, elevators, and others) will

establish building needs. Once these needs are determined, the majority owner should lead the building restoration efforts. There may be situations where the site will not be totally restored within the confines of the building. The companies must individually determine their needs and jointly assess the cost of permanent restoration to determine the overall plan of action.

- 4.5. Multiple restoration trailers from each company will result in the need for designated space and installation order. This layout and control is required to maximize the amount of restoration equipment that can be placed at the site, and the priority of placements.
- 4.6. Care must be taken in this planning to insure other restoration efforts have logistical access to the building. Major components of telephone and building equipment will need to be removed and replaced. A priority for this equipment must also be jointly established to facilitate overall site restoration. (Example: If the AC switchgear has sustained damage, this would be of the highest priority in order to regain power, lighting, and HVAC throughout the building.)
- 4.7. If the site will not accommodate the required restoration equipment, the companies would then need to quickly arrange with local authorities for street closures, rights of way or other possible options available.

5. ENVIRONMENTAL CONCERNS

- 5.1. In the worse case scenario, many environmental concerns must be addressed. Along with the police and fire marshal, the state environmental protection department will be on site to monitor the situation.
- 5.2. Items to be concerned with in a large central office building could include:
 - 5.2.1. Emergency generator engine fuel supply. Damage to the standby equipment and the fuel handling equipment could have created "spill" conditions that have to be handled within state and federal regulations.
 - 5.2.2. Asbestos containing materials that may be spread throughout the wreckage. Asbestos could be in many components of building, electrical, mechanical, outside plant distribution, and telephone systems.
 - 5.2.3. Lead and acid. These materials could be present in potentially large quantities depending upon the extent of damage to the power room.

- 5.2.4. Mercury and other regulated compounds resident in telephone equipment.
- 5.2.5. Other compounds produced by the fire or heat.
- 5.3. Once a total loss event occurs at a large site, local authorities will control immediate clean up (water placed on the wreckage by the fire department) and site access.
- 5.4. At some point, the companies will become involved with local authorities in the overall planning associated with site clean up and restoration. Depending on the clean up approach taken, delays in the restoration of several hours to several days may occur.
- 5.5. In a less severe disaster, items listed above are more defined and can be addressed individually depending on the damage.
- 5.6. In each case, the majority owner should coordinate building and environmental restoration as well as maintain proper planning and site control.

6. EMERGENCY RESPONSE COORDINATION

- 6.1. When an emergency has been declared, the Emergency Response Team (ERT), a group of pre-selected experts, will convene to inventory the damage and initiate corrective actions. These experts have regional access to TDS TELECOM's personnel and equipment and will assume control of the restoration activity anywhere in a TDS TELECOM serving area.
- 6.2. In the past, the ERT has been involved with restoration activities resulting from hurricanes, tornadoes, ice storms and floods. They have demonstrated their capabilities in directing recovery operations during outages due to natural causes, human error or equipment failures, and have an excellent record of restoring service as quickly as possible.
- 6.3. During a major disaster, the ERT may move emergency equipment to the affected location, direct recovery efforts of local personnel and coordinate service restoration activities with the CLECs. They will attempt to restore service as quickly as possible using whatever means is available; leaving permanent solutions, such as the replacement of damaged buildings or equipment, for local personnel to administer.
- 6.4. Part of the ERT's responsibility, after temporary equipment is in place, is to support the NMC efforts to return service to the CLECs. Once service has been restored, the ERT will return control of the network to normal operational organizations. Any long-term changes required after service is

restored will be made in an orderly fashion and will be conducted as normal activity.

7. RECOVERY PROCEDURES

7.1. The nature and severity of any disaster will influence the recovery procedures. One crucial factor in determining how TDS TELECOM will proceed with restoration is whether or not TDS TELECOM's equipment is incapacitated. Regardless of whose equipment is out of service, TDS TELECOM will move as quickly as possible to aid with service recovery; however, the approach that will be taken may differ depending upon the location of the problem.

7.2. CLEC OUTAGE

7.2.1. For a problem limited to one CLEC (or a building with multiple CLECs), TDS TELECOM has several options available for restoring service quickly. For those CLECs that have agreements with other CLECs, TDS TELECOM can immediately start directing TDS TELECOM-originating traffic to a provisional CLEC for completion. This alternative is dependent upon TDS TELECOM having concurrence from the affected CLECs.

7.2.2. Whether or not the affected CLECs have requested a traffic transfer to another CLEC will not impact TDS TELECOM's resolve to re-establish traffic to the original destination as quickly as possible.

7.3. TDS TELECOM OUTAGE

7.3.1. Because TDS TELECOM's equipment has varying degrees of impact on the service provided to SPRINT, restoring service from damaged TDS TELECOM equipment is different. The outage will probably impact a number of Carriers simultaneously. However, the ERT will be able to initiate immediate actions to correct the problem.

7.3.2. A disaster involving any of TDS TELECOM's equipment locations could impact the CLECs, some more than others. A disaster at a Central Office (CO) would only impact the delivery of traffic to and from that one location, but the incident could affect many Carriers. If the Central Office is a Serving Wire Center (SWC), then traffic from the entire area to those Carriers served from that switch would also be impacted. A disaster that destroys a facility hub could disrupt various traffic flows, even though the switching equipment may be unaffected.

7.3.3. The NMC would be the first group to observe a problem involving TDS TELECOM's equipment. Shortly after a disaster, the NMC will begin applying controls and finding re-routes for the completion of as much traffic as possible. These reroutes may involve delivering traffic to alternate Carriers upon receiving approval from the CLECs involved. In some cases, changes in translations will be required. If the outage is caused by the destruction of equipment, then the ERT will assume control of the restoration.

7.3.4. Loss of a Central Office

When TDS TELECOM loses a Central Office, the ERT will:

- 7.3.4.1. Place specialists and emergency equipment on notice;
- 7.3.4.2. Inventory the damage to determine what equipment and/or functions are lost;
- 7.3.4.3. Move containerized emergency equipment and facility equipment to the stricken area, if necessary;
- 7.3.4.4. Begin reconnecting service for Hospitals, Police and other emergency agencies; and
- 7.3.4.5. Begin restoring service to SPRINT and other customers.

7.3.5. Loss of a Central Office with Serving Wire Center Functions

The loss of a Central Office that also serves as a Serving Wire Center (SWC) will be restored as described in Section 7.3.4.

7.3.6. Loss of a Facility Hub

In the event that TDS TELECOM loses a facility hub, the recovery process is much the same as above. Once the NMC has observed the problem and administered the appropriate controls, the ERT will assume authority for the repairs. The recovery effort will include

- 7.3.6.1. Placing specialists and emergency equipment on notice;
- 7.3.6.2. Inventorying the damage to determine what equipment and/or functions are lost;

7.3.6.3.Moving containerized emergency equipment to the stricken area, if necessary;

7.3.6.4.Reconnecting service for Hospitals, Police and other emergency agencies; and

7.3.6.5.Restoring service to SPRINT and other customers. If necessary, TDS TELECOM will aggregate the traffic at another location and build temporary facilities. This alternative would be viable for a location that is destroyed and building repairs are required.

7.4. COMBINED OUTAGE (SPRINT AND TDS TELECOM EQUIPMENT)

7.4.1. In some instances, a disaster may impact TDS TELECOM's equipment as well as SPRINT's. This situation will be handled in much the same way as described in Section 7.3.6. Since TDS TELECOM and SPRINT will be utilizing temporary equipment, close coordination will be required.

8. ACRONYMS

8.1. CO - Central Office (TDS TELECOM)

8.2. ERT - Emergency Response Team (TDS TELECOM)

8.3. CLEC - Competitive Local Exchange Carrier

8.4. NMC - Network Management Center

8.5. SWC - Serving Wire Center (TDS TELECOM switch)